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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/665,921 | 09/18/2003 | Ralph W. Cooper | MAT0001-US1 | 7057 |
| 36732 | 7590 | 12/22/2005 | EXAMINER | |
| LAW OFFICE OF STANLEY K. HILL, PLC | | | GARBER, CHARLES D | |
| P.O. BOX 52050 | | | ART UNIT | |
| MINNEAPOLIS, MN 55402 | | | PAPER NUMBER | |
| | | | 2856 | |

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,921

Applicant(s)

COOPER, RALPH W.

Examiner

Charles D. Garber

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

In view of the Appeal Brief filed on 11/16/2005, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

The amendment after final filed 08/09/2005 has been entered.

Response to Arguments

With the entry of the amendment after final filed 08/09/2005 Examiner accepts that "single, user demand detector" may only be interpreted as a single detector rather than a single user. However, the limitation is not taken necessarily to mean a single detector within the whole system. Nevertheless, even in the case of a single detector within the whole system Examiner also maintains this is an obvious configuration of the Thompson invention. Thompson provides an example of the patented device in a

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house with many rooms with many appliances where the water supply enters the basement.

Examiner considers one having ordinary skill in the art would not believe Thompson only expected the device to apply only to a house with a basement or only to a house with a bathroom and a washroom and a laundry room and a kitchen and a hot water heater as illustrated. The Thompson reference generally applies to "house or building", not just homes with a specific configuration of rooms and appliances. The reasonable person with ordinary skill would understand the Thompson invention would advantageously apply to houses that may not have a washroom, or a house with many bathrooms, or a house without a basement or a house without a laundry room. Indeed, Examiner considers the person having ordinary skill would understand the Thompson invention would advantageously apply to any configuration of rooms and appliances including the trivial case (in the mathematical sense, not to demean Appellant's configuration) of only one detector at one water-using appliance. An example might include an outbuilding such as a detached garage with only a deep sink that is seldom used where a leak could go undetected for long periods. Furthermore, Examiner considers the reduction in the number of similarly functioning elements involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

Appellant also argues (middle of page 3) concerning the cost advantages of the instant invention using a single detector over Thompson. This argument does not address the matter regarding the interpretation of claim terminology or what the prior art discloses or suggests.

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Appellant finally argues (bottom of page 3 to top of page 4) that the specification does not differentiate the user demand produced by a single user versus user demand produced by multiple users and therefore one of ordinary skill would not interpret the use of the system for detecting the demand created by a single user.

This argument is moot in view of amendment entry and new grounds of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 8-11, 13, 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Thompson (US Patent 5,441,070).

Regarding claims 1, 8, Thompson discloses a fluid management system with flow sensors 60 through 74 which are used to detect intended and proper use of water dispensing devices (column 5 line 62 to column 6 lines 18). Thompson also discloses determining a leak if pressure decay based on pressure sensor signal and pressure timing means indicate lost pressure while there is no usage indicated by **any single** flow sensor (see column 3 lines 13-40 and column 10 line 56 through column 11 line 45).

As for claims 2, 3, 9 and 10, Thompson discloses the fluid system is a house (residential) or structure water supply system (see abstract).

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As for claims 4, 11, 20-23, Thompson discloses the user demand is based on a signal from a flow sensor (FS1, FS2, FS3) coupled to a relay switch. Thompson discloses in US Patent 5,161,563 incorporated in the aforementioned patent by reference that the flow sensors are paddle type flow switches.

A flow meter is "An instrument for monitoring, measuring, or recording the rate of flow, pressure, or discharge of a fluid, as of a gaseous fuel" according to The American Heritage Dictionary of the English Language. The flow sensor of Thompson may be considered to monitor the discharge of flow as in this flow meter definition. In this respect the flow sensor of Thompson may be considered to be both a flow meter and a flow switch. Thompson specifically identifies the Kobold PSR-5115 flow switch (see attached specification sheet) which has an adjustable activation value inherently equivalent to a preset minimal user flow rate as in the instant invention.

As for claim 6 and 13, Thompson discloses sending an output signal from pressure switch 136 when the pressure is at or below a threshold pressure (column 10 line 67 to column 11 line 5). This signal is used in the determination of excess pressure decay noted above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5, 7, 12, 14, 15-19 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Thompson (US Patent 5,441,070).

Regarding claim 15, Thompson discloses a fluid management system with flow sensors 60 through 74 which are used to detect intended and proper use of water dispensing devices (column 5 line 62 to column 6 lines 18). Thompson also discloses determining a leak if pressure decay based on pressure sensor signal and pressure timing means indicate lost pressure while there is no usage indicated by **any single** flow sensor (see column 3 lines 13-40 and column 10 line 56 through column 11 line 45). Assuming the term "single, user demand detector" does not limit the system as a whole to one and only one flow sensor and may be construed as including a single detector at any user location Thompson shows in figure 1 that each location of potential water usage including only a single flow sensor.

Alternatively, assuming the term "single, user demand detector" may only be construed to mean the system as a whole may only include one and only one flow sensor Examiner considers it would have been obvious to one having ordinary skill in

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the art at the time the invention was made to include only one rather than plural use detectors, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184.

As for claims 17, 18, Thompson discloses the user demand is based on a signal from a flow sensor (FS1, FS2, FS3) coupled to a relay switch. Thompson discloses in US Patent 5,161,563 incorporated in the aforementioned patent by reference that the flow sensors are paddle type flow switches.

A flow meter is "An instrument for monitoring, measuring, or recording the rate of flow, pressure, or discharge of a fluid, as of a gaseous fuel" according to The American Heritage Dictionary of the English Language. The flow sensor of Thompson may be considered to monitor the discharge of flow as in this flow meter definition. In this respect the flow sensor of Thompson may be considered to be both a flow meter and a flow switch. Thompson specifically identifies the Kobold PSR-5115 flow switch (see attached specification sheet) which has an adjustable activation value inherently equivalent to a preset minimal user flow rate as in the instant invention.

As for claim 16, Thompson discloses closing the main shut-off valve (column 11 lines 32-33) in the event the pressure decays while there is no monitored flow.

As for claim 19, Thompson discloses the pressure sensor is a "pressure switch" (column 10 line 64).

As for claims 5, 7, 12 and 14, Thompson as applied above discloses the claimed invention except for threshold values for minimum pressure and flow rate at 15 psi and

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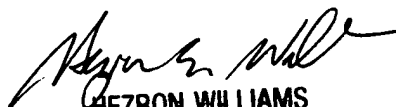
0.2 gallons per minute respectively. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide threshold values for minimum pressure and flow rate at 15 psi and 0.2 gallons per minute respectively, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles D. Garber whose telephone number is (571) 272-2194. The examiner can normally be reached on 8:00 a.m. to 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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Art Unit 2856